Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which ~~decods~~ decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart a starting step of equalizing steps for equalizing a reception signal, depending upon a change state of the tap coefficient used while the reception signal is equalized.

Claim 2 (original): A waveform equalizer equipped comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said

equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal.

Claim 3 (original): A waveform equalizer equipped comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit;

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change

state of the tap coefficient during the equalization of said reception signal, and further so as to repeatedly perform said operation, depending upon a change condition of the tap coefficient while restarting the equalization of said reception signal.

Claim 4 (original): A waveform equalizer as claimed in any one of the preceding claims 1, 2, and 3, wherein said tap coefficient monitoring unit monitors only a specific tap, and when a sharp change in a tap coefficient of said specific tap is detected, said tap coefficient monitoring unit instructs that the tap arrangement of said equalizing filter unit is changed so as to restart the equalization of the reception signal.

Claim 5 (original): A waveform equalizer as claimed in any one of the preceding claims 1, 2, and 3, wherein said tap coefficient monitoring unit monitors only a specific tap, and when dispersion of a change amount of said tap coefficient exceeds a certain threshold value, said tap coefficient monitoring unit instructs that the tap arrangement of said equalizing filter unit is changed so as to restart the equalization of the reception signal.

Claim 6 (original): A waveform equalizer as claimed in any one of the preceding claims 1, 2 and 3, wherein said

tap arrangement control means further comprising an impulse response predicting device for predicting an impulse response of a transfer path; and

wherein said tap arrangement control means changes the tap arrangement of said equalizing filter unit in such a manner that said tap arrangement becomes suitable for the next impulse having a large pulse component in response to an impulse response predicted by a reference signal.

Claim 7 (original): A waveform equalizer as claimed in any one of the preceding claims 1, 2 and 3, wherein said tap arrangement control means comprising an impulse response predicting device for predicting an impulse response of a transfer path; and

wherein said tap arrangement control means changes the tap arrangement of said equalizing filter unit in such a manner that said tap arrangement becomes optimum with respect to an impulse response predicted by both the equalized output of said discriminator and a condition of the reception signal.

Claim 8 (currently amended): A mobile station wireless apparatus equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said wave form equalizer comprising:

an equalizing filter unit including a delay circuit ~~wiht~~ with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart a starting step of equalizing steps for equalizing a reception signal, depending upon a change state of the tap coefficient used while the reception signal is equalized.

Claim 9 (original): A mobile station wireless apparatus equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the

tap arrangement of said equalizing filter unit so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal.

Claim 10 (original): Amobile station wireless apparatus equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said receptions signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal; and further so as to repeatedly perform said operation, depending upon a change condition

of the tap coefficient while restarting the equalization of said reception signal.

Claim 11 (original): A mobile station wireless apparatus equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit;

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit; and

detector means which detects a moving speed of the mobile station wireless apparatus,

wherein when the moving speed is higher than a preselected threshold value, the tap arrangement of said equalizing filter unit is changed so as to restart a starting step of equalizing steps for equalizing a reception signal, depending upon a change state of the tap coefficient used while the reception signal is equalized.

Claim 12 (original): A mobile station wireless apparatus equipped with a wave form equalizer capable of

removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output. signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit;

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit; and

detector means which detects a moving speed of the mobile station wireless apparatus,

wherein when the moving speed is higher than a preselected threshold value, the tap arrangement of said equalizing filter unit is changed so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal.

Claim 13 (original): A mobile station wireless apparatus equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit

with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit;

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit; and

detector means which detects a moving speed of the mobile station wireless apparatus,

wherein when the moving speed is higher than a preselected threshold value, the tap arrangement of said equalizing filter unit is changed so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal; and further so as to repeatedly perform said operation, depending upon a change condition of the tap coefficient while restarting the equalization of said reception signal.

Claim 14 (original): A base station wireless apparatus equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit

with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart a starting step of equalizing steps for equalizing a reception signal, depending upon a change state of the tap coefficient used while the reception signal is equalized.

Claim 15 (original): A base station wireless apparatus equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to

restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal.

Claim 16 (original): A base station wireless apparatus equipped with a wave form equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal; and further so as to repeatedly perform said operation, depending upon a change condition of the tap coefficient while restarting the equalization of

said reception signal.

Claim 17 (original): A mobile communication system having a base station and a mobile station, in which at least one of said base station and said mobile station is equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart a starting step of equalizing steps for equalizing a reception signal, depending upon a change state of the tap coefficient used while the reception signal is equalized.

Claim 18 (original): A mobile communication system having a base station and a mobile station, in which at least one of said base station and said mobile station is equipped with a waveform equalizer capable of removing an

adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit having a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal.

Claim 19 (original): A mobile communication system having a base station and a mobile station, in which at least one of said base station and said mobile station is equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said

equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit; and

a tap coefficient monitoring unit for monitoring a tap coefficient of said equalizing filter unit, and changes the tap arrangement of said equalizing filter unit so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal; and further so as to repeatedly perform said operation, depending upon a change condition of the tap coefficient while restarting the equalization of said reception signal.

Claim 20 (original): A mobile communication system having a base station and a mobile station, in which said mobile station is equipped with a wave form equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap

arrangement of said equalizing filter unit;

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit; and

detector means which detects a moving speed of the mobile station wireless apparatus,

wherein when the moving speed is higher than a preselected threshold value, the tap arrangement of said equalizing filter unit is changed so as to restart a starting step of equalizing steps for equalizing a reception signal, depending upon a change state of the tap coefficient used while the reception signal is equalized.

Claim 21 (original): A mobile communication system having a base station and a mobile station, in which said mobile station is equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit;

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit; and

detector means which detects a moving speed of the mobile station wireless apparatus,

wherein when the moving speed is higher than a preselected threshold value, the tap arrangement of said equalizing filter unit is changed so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal.

Claim 22 (original): A mobile communication system having a base station and a mobile station, in which said mobile station is equipped with a waveform equalizer capable of removing an adverse influence caused by frequency selective fading, said waveform equalizer comprising:

an equalizing filter unit including a delay circuit with a tap;

a discriminator which decodes an output signal of said equalizing filter unit;

tap arrangement control means which controls a tap arrangement of said equalizing filter unit;

a tap coefficient monitoring unit which monitors a tap coefficient of said equalizing filter unit; and

detector means which detects a moving speed of the

mobile station wireless apparatus,

wherein when the moving speed is higher than a preselected threshold value, the tap arrangement of said equalizing filter unit is changed so as to restart reception signal equalizing steps from a preselected step prior to the present step thereof while said reception signal is equalized, depending upon a change state of the tap coefficient during the equalization of said reception signal; and further so as to repeatedly perform said operation, depending upon a change condition of the tap coefficient while restarting the equalization of said reception signal.